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TO: USDA Food Pyramid revisions

From: Edward Siguel, MD, PhD
Ref: The USDA Food Pyramid
Date: August 20, 2004

Introduction

My presentation is oversimplified due to space, time restrictions. These are my opinions and may contain errors. Please read my papers at my web site, essentialfats.com, and at Medline.

Definitions: Essential fats = EFs = PUFAs of the omega-3 and omega-6 families.

About myself

I study the effects of different types of fats on health and disease. I invented a method to measure different types of fatty acids and trans fats in blood. I created a data base of fatty acid profiles with over 1,000 blood samples from patients, subjects and Framingham Heart study subjects.

Based on my presentations at scientific meetings, published articles, and personal conversations with over 100 fat researchers, I believe I have the best data on the relationship between fats in blood, health and disease.[1] I will summarize a few findings.

- Excessive caloric intake from foods low in essential fats creates a biochemical deficiency of essential fats. Most overweight people have biochemical deficiencies of essential fats unless they became overweight from eating too many healthy foods rich in essential fats (a rare condition in America). These matters are discussed in several of my publications and patent.
- More than 25% of the US population is biochemically deficient in w6s; more than 50% of the US population is biochemically deficient in w3s (based on blood tests of different population groups).
- Whole grains and processed grains are not much different from each other. Distinctions are too subtle and too complex for consumers to understand and make wise food choices. It is easy to distort these differences and provide nutrient-poor calories with cookies/ energy bars made with whole grains but few essential fats.

Americans need to eat few calories or else gain weight. Each calorie must be nutrient dense. Some grains contain relatively few essential fats and nutrients (particularly w3s). When many calories come from grains, it is difficult for people to eat enough essential fats from the remaining daily calories (restricted to maintain optimal weight). Low fat foods, even if made with whole grains, may not provide enough essential fats to meet daily needs.

It is also important to note that the requirements for essential fats should be listed as grams/kg body weight/day instead that as a percent of calories (see my book at amazon.com).

There are several other issues relevant to the Food Pyramid. See footnote.[2]

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[1] Data in part presented at FASEB 2004. In part published. OMB, FDA, IOM misunderstood my findings; got it wrong with their trans fats emphasis on labels. There are many harmful fats other than the few trans that may be reported on food labels. See my articles in INFORM, J. of the Am. Oil Chemistry Society.

[2] It is misleading to recommend that people eat foods, such as breakfast cereals, with 100% RDA. During the rest of the day, people continue to eat more vitamins and minerals. The body has to work extra to eliminate them. This may cause kidney overwork, and the expelling of key nutrients, such as K, in the urine.

Exhibit 2 of 10

Essential Fats are more important for optimal health than Trans and other fats

TC/HDLC (one of the best risk factors for cardiovascular disease) is inversely proportional to Essential fats, directly proportional to Trans fats (based on measurements in human blood).

Essential fats account for ~50% of variability, trans for ~ 10%. Levels of essential fats appear to be, by far, the most significant factor in cardiovascular diseases, abnormal lipids, diabetes, and hypertension. Other factors are minor in comparison. Read my papers on these matters.

What this means is that essential fats are by far the best and most significant variable (in terms of the percent of variability predicted by correlation R or R^2). Other variables such as age, sex, and weight, have less effect on TC/HDLC. It follows that any study that fails to account for blood levels of essential fats fails to consider a major variable and is therefore likely to produce misleading results. Also notice that it is very difficult to predict blood or tissue levels of essential fats from dietary intake (due to a variety of reasons beyond the scope of this document).

Trans FA in blood are burned (used) quickly; lack of EFs is more critical. Although Trans fats are likely to be undesirable in foods, it is more harmful to eat few essential fats. A diet low in EFs and Trans fats is likely to be more harmful than a diet high in Trans fats and EFs (this is a complex issue, depending on body levels of trans and EFs, weight, etc.). The implication is that replacing trans fats in foods with non-trans fats may be counterproductive when the fats replaced contain fewer essential fats than the original fats. For this reason, some margarines rich in essential fats may be healthier than others poor in essential fats, particularly for people who exercise and burn the extra Trans fats. The current trend to replace Trans fats in food with fats low in essential fats (accompanied with the trend to eat too many calories) will likely increase morbidity and mortality. This is not necessarily bad news if the intent is to balance the budget by cutting the life span of social security recipients. The replacement of Trans fats, in my opinion, offers great opportunities to consultants, lawyers and companies marketing new products. Together with HIPAA they represent one of the greatest employment acts of the current century. Moreover, while HIPAA applies mainly to the US (thereby reducing its profit-making appeal), reducing Trans fats in foods and convincing people to eat other foods has global appeal.

Eating too many calories low in essential fats is far more harmful than eating Trans fats. This means that being overweight or gaining weight from eating too many calories is likely to be more harmful than eating a few trans fats. A person's risk for cardiovascular disease may ***increase*** when he stops eating 100 calories per day of cookies or French fries because they contain ***Trans*** fats, and starts eating 150 calories per day of cookies or French fries made with a fat low in essential and Trans fats. This situation may occur when people eat a lot of foods rich in saturated or monounsaturated (MONO) fats but low in trans because they read the label low in trans and cholesterol and think the food is healthy (or think MONOs are healthy).

Beware of MONOs. They are mostly unnecessary. Emphasize eating more essential fats, not eating more unsaturated fats (that includes MONOs).

It is known that MONOs are not essential fats in humans. Humans can make them from saturated fat. There is a very strong inverse relationship between plasma PUFA and MUFA levels in human blood. The relationship exists in people from different study groups, different health conditions, different weight, sex, etc.

My implication is that eating more or less MUFA is likely to have a long term effect similar to sat fat.

I consider the reports from the US Dietary Guidelines made in May, 2004, to be flawed. They misunderstood my data. I consider their comments on MONOs flawed because apparently they indicate

that there is a positive relationship between MONOs and PUFAs, or there is some health advantage to eating more MONOs. Instead, people should eat more calories from natural foods naturally low in fat, such as vegetables or lean meats. And eat fewer calories.

Beware that olive oil contains little w3s. Eating olive oil requires a highly sophisticated diet low in calories and rich in w3s and nutrients + lots of exercise.

KISS people with KISS principle = Keep It Simple S.

There is too much info on labels and nutrition recommendations. I cannot carry a computer and scale to stores, restaurants, kitchen to calculate nutrient intake each day. I submit food labels are misleading for most consumers. Food labels concentrate on a few items and miss many others. The government should get out of the business of requiring people to keep daily track of each vitamin and mineral and major nutrient, and instead offer a simpler message based on practical foods. Alternatively, they could encourage companies to market more PCs with built-in food scales.

My simple message is to emphasize total calories, eating natural foods high in cells. These foods are naturally rich in protein, essential fats, vitamins, minerals, and other nutrients. My suggestions are:

- Eat foods with cells. Foods without cells ~ = nutrient-poor calories. People can learn to recognize foods with cells. They "grow" in nature. They move or grow before we eat them. That is what animals eat. That is what humans used to eat before the advent of food-processing machinery.
- Eat foods rich in w3 and w6 essential fats, such as membranes, some vegetable oils. This is important for people who are deficient in essential fats or those on low calorie diets that do not get enough essential fats from their foods.
- Supplement with MVI a few times per week unless one eats lots of healthy food and little junk food. This is particularly important for people who have a relatively sedentary life and cannot get enough nutrients from their food (because they do not eat nutrient-dense foods or eat few calories to remain slim). Speaking of sedentary life, remember that our ancestors spent time chasing and being chased by food (or hungry colleagues). The way we chase food today at supermarkets and restaurants is not enough exercise.
- Avoid highly processed foods. They are often nutrient poor and calorie rich. Next time you eat a pastry, remember to chase a subway to use up those calories.

The food pyramid and how to improve it

I propose a food pyramid that relies on natural foods rich in cells. These foods contain thousands of nutrients; processed foods contain very few.

My food pyramid is available in my web site and publications. Copy attached.

Controlling obesity and overweight: a simple message

The government should have a very simple message: people gain weight from eating too many calories. There is a simple, practical and meaningful way to lose unnecessary weight: EAT FEWER CALORIES and eat food in accordance with Dr. Siguel's pyramid (more vegetables, avoid processed carbs).

Medicare, Medicaid, and health insurance companies are going broke trying to pay for expensive diagnosis and treatment associated with overweight.

I propose a radical solution. High tech, simple, inexpensive. People should use their belts (or a rope) to measure their waists. In consultation with a health professional or tables by height, sex, they should select an ideal waist. If they are over it, they should use my TREATMENT. Treatment consists of duct tape applied during meals (on the mouth). This treatment is likely to lead to weight loss regardless of people's genes, metabolism, environment, state of mind (psychotic or otherwise), or political preference (as I indicated in my book, exceptions apply to people with plant-like genes who gain weight from excessive breathing. These people convert air into carbon like plants do. However, despite contrary opinions, this is probably a very small portion of the US population).

I propose that Medicare and Medicaid offer consumers a choice of coverage: they will pay for either conventional treatments, or for the use of the belt and duct tape + an all expenses paid trip to the city of the consumer's choice.

My concerns about the proposed Food Pyramid

I repeat my concerns about the Food Pyramid published in *Am. J. Clinical Nutrition*, an exchange of letters with the USDA. My position is that current and proposed recommendations encourage eating too many calories low in nutrients and essential fats. The nutrition guidelines encourage the marketing of junk food made with highly processed ingredients low in essential fats and nutrients.

One fallacy is that an interpretation of the food pyramid is an energy bar made with highly processed ingredients. Consider a food or energy bar made with vegetable carbs, protein, vegetable cocoa, added vitamins, minerals, and genetically modified oils rich in monos. This type of food bar may be eaten by millions thinking that it provides energy (it does, but people confuse caloric energy with energy as a sense of well-being) and complies with the USDA food pyramid because it has a balance of nutrients. Some food bars may have fiber, choline, antioxidants, and many other nutrients, perhaps in very small quantities, but no one can keep track of so many ingredients. It may even have some soybean or flax seeds to incorporate essential fats (although these fats may not be absorbed).

This energy bar may appear to represent an almost perfect food pyramid except that it has no cells. But if we spit on eat before we eat it, we add cells, enzymes, and immunoglobulins.

We should not need to spit on food that complies with the food pyramid to make it healthier. The slogan should be to add cells on the food pyramid and make it perfect (but not by spitting on it).

Conclusion

For 20+ years, I hoped science could teach the follies of current nutrition recommendations. Instead, I saw friends get overweight and die following the diets used by doctors. I think the food pyramid is one of the major contributors to premature death. I have tried for many years to convince the government and researchers that nutrition recommendations must be drastically changed, or else people will eat suboptimally and develop health conditions associated with nutrient imbalances.

A CME (continuing medical education) course I took discussed the case of an overweight diabetic Type II person. The 1st, 2nd, and 3rd priority treatments proposed were statins, statins, statins. I suggested that the treatment of choice was not eating, or eating to lose weight, but that was considered too difficult and unnecessarily drastic.

Perhaps satire will do better.

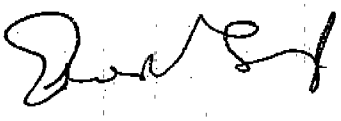
We must avoid the trail of those who recommended bleeding to cure disease, or assured us the earth was flat. I took me more than 20 years before people recognized the follies of eating low fat diets deprived of essential fats or filled with margarines rich in trans fats. I wish it would not take 20 years to recognize the follies of current nutrition recommendations.

Be wary of silly recommendations. Recommending that people eat food in moderation, eat a healthy or balanced diet, do not get overweight, eat sensibly, drink a lot of water but not too much, and so on are like telling people to buy low and sell high - obvious and not useful.

To conclude, keep nutrition recommendations and the food pyramid very simple. Follow my proposed Siguel's Natural Food Pyramid.

- Eat natural foods with cells.
- Emphasize vegetables.
- Minimize processed carbohydrates and fat.
- Be slim or cut your caloric intake and exercise more.

Respectfully yours.



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- Web site. Essentialfats.com. Click on research. Also search on search engine for healthnewsreview,
- See articles by Dr. Cordain on cereals.

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For your convenience I attach several abstracts

FASEB 2004 (early draft, I could not find a copy of the accepted abstract)

The ratio Total/HDL Cholesterol (**TC/HDLC**) predicts coronary artery disease (CAD). Plasma essential and trans fatty acids (**TFAs**) have been linked to CAD, but their relative impact is poorly known. **Methods.** We analyzed the relationship between plasma TC/HDLC, polyunsaturated fatty acids (**PUFA or essential fats**) and TFAs, using cross-sectional data, ~500 subjects (~50% women) in the Framingham Heart Study cycle 4, high resolution capillary column gas-liquid chromatography optimized for cis-trans separation, and multivariate regression. **Results.** TC/HDLC is inversely proportional to the percent of plasma PUFA and proportional to the levels of TFAs. Most of the variability in TC/HDLC is predicted by PUFAs. Compared with healthy reference subjects, the Framingham subjects had higher levels of TFAs. For some, the levels are so high that it seems safe to recommend significant dietary changes to reduce their levels. **Conclusions.** Evaluation of plasma fatty acid profiles, increased balanced intake of PUFA and reduced intake of processed fats (like TFAs) to bring fatty acid profiles of subjects with low PUFA plasma levels closer to the profile of a healthy reference group can reduce high TC/HDLC. Reductions of more than 50% in TC/HDLC appear feasible with dietary modification alone. Individuals with elevated plasma TFA levels and low PUFAs ought to significantly modify their diet to prevent CAD. Instead of emphasizing mostly food label changes for TFAs, policy makers should emphasize adequate intake of essential fats.

Background. Dietary and plasma fatty acids have been linked to total cholesterol but not to the ratio of Total/HDL Cholesterol (**TC/HDLC**).

Methods. To evaluate the relationship between dietary and plasma levels of **PUFAs** and TC/HDLC, we analyzed cross-sectional and longitudinal data using 519 plasma samples (50% men, 50% women) from subjects participating in the Framingham Heart Study and results from a study feeding diets rich in either n-6 linoleic (**LA**) or n-3 alpha-linolenic acid (**ALA**) with or without fish oil supplements (n-3 derivatives).

Results. The values of TC/HDLC are inversely related to the percent of plasma PUFA when both variables are measured at the same time in different subjects, $R = 0.82$, $p < 0.000001$. PUFAs in phospholipids increase in response to increased dietary intake of different PUFA, either n-3, or n-6 or fish oils. There was a highly significant inverse relationship between TC/HDLC and the percent of PUFA in phospholipids, $R = 0.97$, $p < 0.001$. The relationship was similar regardless of the source and type of dietary fatty acids. A similar relationship existed when only the baseline points were considered.

Conclusions. When plasma PUFA % increases, either in response to a diet high in PUFA or across different subjects, TC/HDLC ratios decline. Evaluation of plasma fatty acid profiles and increased *balanced* dietary intake of PUFA to bring fatty acid profiles of subjects with low PUFA plasma levels closer to the profile of a healthy reference group is an effective approach to reduce high TC/HDLC. Reductions of more than 50% in TC/HDLC appear feasible with dietary modification alone. Further research into fatty acid metabolic activity may determine the biochemical basis of common dyslipidemias

We applaud the USDA for acknowledging the need for **EFAs** in the diet. However, we dispute their contentions that the Food Pyramid provides clear direction to the American people on meeting that need, that the pyramid encourages people to add oil to low fat foods, or that Americans interpret USDA guidelines to mean that EFAs are essential to the diet. Nowhere does the pyramid suggest that "liquid vegetable oils be used most often", or that 1/3 of dietary fat be provided as vegetable oil.

Lumping oils, fats and sugar at the top of the pyramid with the instruction "use sparingly" gives a clear message that EFA-rich oils are to be avoided, as if they shared the undesirable properties of sweets and fats (known as "bad" and "nutritionally useless"). The USDA reinforces this incorrect belief by treating all oils equally (despite major differences in EFA composition), and by stating that "***these foods provide calories and little else nutritionally.***" A visit to any supermarket will reveal the highly processed nature of many foods nearly devoid of EFAs. Hardest hit are w3 fatty acids, which are drastically lowered by hydrogenation. Simopoulos has found that current w3 intake is below that of the last century, probably causing an increase in brain dysfunction, dyslexia, behavioral abnormalities, and learning abnormalities.

Although the USDA acknowledges the essentiality of linoleic acid, linolenic acid is absent from their comments. The current trend towards taking more **MUFAs** further depletes the intake of EFAs. Many consumers use olive or corn oil, both of which contain practically no w3s. Soybean oil has both EFAs, but most soybean oil in foods is hydrogenated and thereby depleted of w3s. Furthermore, many manufacturers have shifted production towards low fat foods and removed soybean oil from their products (e.g., salad dressings and sauces). Thus, one of the last remaining sources of EFAs is disappearing from the market.

Most low-fat foods are composed of processed carbohydrates with practically zero EFAs; some are high in *trans* fatty acids (**TFAs**). Companies can list a product as being low in saturated fat even though it is high in TFAs. The USDA statement that shortening ("margarine") makes up 1/3 of added fat indicates the implicit acceptance of a high TFA intake, despite the growing knowledge from our own research and that of others that TFAs are a significant coronary risk factor, and raise Total/HDL cholesterol.

Commercials and government advertisements create the perceived "desirable" goal of eating no fat. In 1994, we were interviewed by more than 100 reporters in the US and abroad. It was their consensus that media and advertisements encourage people to eat zero-fat diets. Fat is presumed to be bad, and therefore less of it is better. Consumers are not told that EFAs are essential.

Individuals obtaining most of their calories from very low-fat foods based on processed carbohydrates without oil supplements cannot possibly obtain enough EFAs if they follow the USDA pyramid. Because of huge variability in PUFA intake, millions of people do not eat enough PUFAs, even if "average" individual intake is adequate.

> **Paragraph** not in published letter (added material)
>
> For example, a slim woman eating 1,500 kcal/day who faithfully follows the USDA Food Pyramid easily obtains 700 calories from breads, pasta and cereals. The remaining 800 calories may come from vegetables, fruits, chicken, and low fat dairy products. From these foods she cannot possibly get 15-20 grams of w3 and w6 EFAs/day. If she is pregnant or breast feeding, her child may have impaired development.

The USDA alleges that the Food Pyramid reflects up-to-date knowledge of nutrition. However, the implicit and explicit assumptions/ citations in the USDA's Pyramid justification are scientifically incorrect, as they are based on obsolete recommendations.

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Alternative Paragraph (added material)

It does not matter if the USDA *believes* that Americans eat enough **EFAs** or if it believes that EFA deficiency is not prevalent. What matters is accurate data from blood tests, which show that deficiencies are common in the US population.

We analyzed fatty acid profiles of 500+ adults from the Framingham Heart Study. More than 20% had biochemical evidence of w3 or w6 deficiency. At least 5% had deficiencies so severe that they would likely have reduced life expectancies.

We found that EFA abnormalities are the most significant nutritional factor in elevated TC/HDLC. Correcting EFA deficiencies leads to a major reduction in TC/HDLC (unpublished data). Dr. Holman, who established the old criteria for EFA requirements, agrees that EFA deficiency is highly prevalent in the USA (personal communications).

Paragraph not in published letter (added material)

Translated into numbers for the US population, we estimate that severe EFA abnormalities affect more than 10 million people, and that significant EFA abnormalities (associated with chronic disease) affect more than 50 million people.

We have been contacted by numerous physicians and patients whose TC/HDLC increased after being on a strict low-fat diet. Those whose blood we analyzed had significant EFA deficiencies. We submit that the USDA recommendations will contribute to the development of EFA abnormalities, obesity, hypertension, dyslipidemia, and overall morbidity in the 1990's. EFA abnormalities are most likely to affect children, women, blacks and Hispanics, who characteristically eat foods low in EFAs.

We challenge the USDA to provide us with blood samples of individuals who eat highly processed, low-fat American diets. We will demonstrate the dangers of such diets by determining their EFA profiles. Screening selected populations for EFA abnormalities is practical and inexpensive in the context of the huge USDA budget and the billions spent on cardiovascular disease.

We propose that nutritional requirements for EFAs should be based on absolute grams /kg body weight/day rather than as a percentage of daily calories. Otherwise, individuals who eat less than 1,500 kcal/day would meet the USDA recommended guidelines for EFA intake, but would become EFA deficient.

In our clinical experience, the amount of PUFAs recommended by the USDA is too low for most adult Americans. By establishing an arbitrary and scientifically misleading recommendation for EFA intake, it is assured that consumers meet USDA guidelines. By refusing to fund studies on biochemical evidence of EFA deficiency, the USDA can continue to support its mistaken belief that EFA deficiency does not exist in America. The beneficiaries of this policy are bureaucrats protecting their jobs, researchers studying low-fat foods, corporations selling low-fat foods to an uninformed and mislead public, and companies selling drugs to lower abnormal cholesterol and hypertension caused by EFA deficiencies. The losers are consumers, who are faced with increasing bills, abnormal cholesterol, and chronic diseases (including heart disease), and nutritionists and patients, who face conflicting and misleading guidelines.

Paragraph not in published letter (added material)

Fat nutrition policy is a failure in America. People think that they can eat as much food as they want as long as it is low in fat, and they thus accumulate saturated fat (gain weight) by eating low fat foods. The 1995 Harris Poll found that 71% of Americans over 23 years of age are overweight. The percent of overweight has been increasing since 1983. It is obvious that Americans are substituting carbohydrate calories for fat. Americans are eating low fat foods as if these foods had zero calories, then wonder why they gain weight. Low fat diets have failed to control obesity in America; furthermore, morbidity from cardiovascular disease is also increasing. We propose that an EFA deficient diet would make people hungry and further contribute to obesity.

Under FDA and consumer protection statutes in most states, failure to explain the need for and role of EFAs would be considered a serious misrepresentation that would subject the perpetrator to severe fines.

Paragraph not in published letter (added material)

Our clinical experience and research data indicate that the USDA nutrition recommendations, coupled with misleading food labels, are a major contributory factor to CAD. Unless nutrition policy is drastically changed to emphasize the need for EFAs, we are afraid that current policies may increase morbidity and mortality.

The best way to control health-care costs is through self-responsibility, effective prevention, and nutrition. We urge the USDA to launch an information campaign to educate the American public about EFAs, to include EFA and TFA content in food labels, to fund further research on EFAs, and to amend nutrition policy to reflect the need for EFAs

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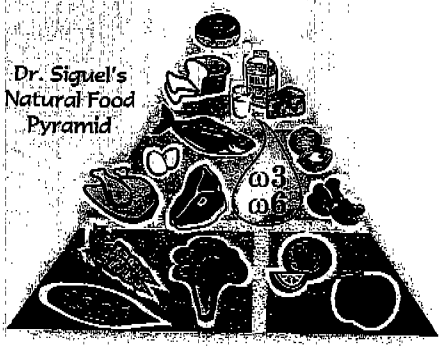


essentialfats.com

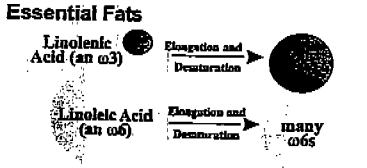
eat to live long and well

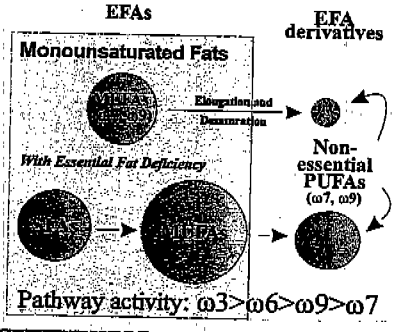
Fat Facts

FA = Fatty Acids
SFA = Saturated FA
MUFA = Monounsaturated FA
PUFA = Polyunsaturated FA
TFA = Trans FA ~ Trans fats
EFA = Essential Fatty Acid

"Essential Fats (EFs)" =
= EFAs (ω3+ ω6 precursors) +
+ EFA derivatives (ω3+ ω6) =
= linolenic(ω3) + linoleic(ω6) +
+ ω3 derivatives + ω6 derivatives.
= PUFA ω3 + PUFA ω6
PUFAs = PUFA ω3 + PUFA ω6 +
+ PUFA ω9 (in EFA deficiency).

Polyunsaturated Fatty Acids





Pathway activity: ω3>ω6>ω9>ω7

Nutrition, Fat and Health

- Weight gain (usually as saturated fat)
- *Calories IN - Calories OUT*
- Low fat diets, low in PUFA
- increase risk of cardiovascular disease
- reduce brain function
- Avoid highly processed/cooked food- carbs, fats
- Avoid Trans Fatty Acids (*trans* fats).
- Eat natural foods with cells.
- The brain needs cholesterol & EFs.
- **Optimal** nutrient mixture is unknown.
- **Carbs** ~ 130gr/day ~ 35% calories
- **Protein** ~ 50-100 gr/day ~ 15% calories
- **FAT** ~ 10%-35% of calories/day
- **Dr. Siguel**: Total calories, not total fat.
- Eat to be slim, eat few calories
- ω6 ~ 5-20 gr/day; ω3 ~ 2-10 gr/day
- *NAS (Nat'l Acad Sciences) recommends eating Linolenic ω3 + Linoleic ω6*
- *# grams varies w/ pregnancy, child, adult*

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Andres

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Food Guide Pyramid Reassessment Team
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K-STATE
Kansas State University
Cooperative Extension Service
K-State Research and Extension
Multicounty Extension Specialist
Food, Nutrition, Health and Safety

Hiawatha, KS
(toll free)
Fax:

Dear Team:

I am a registered, licensed dietitian and serve as a Multicounty Specialist in Food, Nutrition, Health and Safety for Kansas State Research and Extension. The following are my comments on the revision of the Food Guide Pyramid:

I believe the pyramid graphic is still a good way to represent our daily food requirements. The focus on a high carbohydrate diet is the same as recommended by countries around the world (10). The problem is not with the pyramid, but that people don't follow it(3,6). The perception of our intake is different from our actual intake(2).

According to Connie Evers, MS, RD, author of *Feeding Kids Newsletter*, whole grains should be promoted over refined grains(4). I agree, but believe they should not be promoted exclusively because refined grains contain much more folic acid than whole grains do. "Although whole grains should be encouraged for other health benefits, the best sources for folic acid consumption in grain foods come in the form of enriched/fortified grain products and cereals(9)."

Also, it makes more sense to include the starchy vegetables with the grain group on the Food Guide Pyramid. Because of their high starch content, the American Diabetes Association includes these vegetables (potatoes, corn, peas, baked beans and squash) with the grain group(1).

I also agree with Evers to focus, within food groups, on nutrient dense foods(4). There needs to be a way to identify the best protein sources, best carbohydrate foods, and best fats. Evers also recommends cutting down on simple sugars, especially sweetened beverages (4). I agree that the intake of these foods and beverages should be reduced. To lower total calorie intake, foods of low energy density should be emphasized in each food group(7).

The Food Guide Pyramid does need to include physical activity, as it is an important part of energy balance.

We need to promote research-based information that demonstrates following the Food Guide Pyramid does result in a healthier body and reduced risk of chronic diseases.

Connie Evers has several good ideas to teach the Food Guide Pyramid in her book, *How To Teach Nutrition to Kids*(5). Included are a hunger scale, how to avoid "Pyramid Overload," 15 uses for a blank pyramid, making a pyramid counter, measuring centers, using the pyramid in dramatic play, and a pyramid party.

Andres 2 of 2

The Oregon Dairy Council recommends that practitioners need to recognize the diversity of approaches to the Food Guide Pyramid when making nutrition recommendations(8). People are "purists," "nay sayers," or "middle grounders." The message cannot be the same for everyone.

In my experience consumers are often confused about serving sizes on food labels. It would be helpful if the serving sizes of the pyramid and the serving sizes on food labels were the same.

Educational materials should be provided for schools to teach children and youth how to eat for good nutrition and health. It is better to prevent chronic disease than treat after it occurs. The Cooperative Extension Service is an ideal means for informing the public about prevention and promoting health. In some states, it is located in every county, and provides information based on research, not based on making a profit by selling a product.

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Thank you for welcoming public comment!

Sincerely,

Carolyn Andres

Carolyn M. Andres, RD, LD

FIRSTBE-FIT, LLC

Washington, DC

Phone:
Cell:

Food Guide Pyramid Reassessment Team
USDA Center for Nutritional Policy and Promotion
3101 Park Center Dr., Room 1034
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Parker
1 of 3

U.S.D.A. Reassessment Team:

I am a 47 year old N.S.P.A., N.A.S.M. Certified Personal Trainer, currently training at The Sports Club/LA in Washington D.C. I have been an athlete most of my life, and served in the U.S. Navy Submarine Service for 10 years; maintaining a proper and fit military bearing throughout my enlistment. I wrestled, ran track, and played football in high school, wrestled in college, and won a position on the 1980 All Navy Wrestling Team.

Over these decades I've studied and learned much in the way of exercise, fitness, and nutrition, becoming successful as a trainer as a result. The need to explain the varied and sometimes complex nuances of fitness to the generally uninitiated and confused client, required that I relied on my training as a Navy Master Training Specialist. I develop a variety of teaching aids to convey specific fundamental points.

One such aid was a rule designed to help individuals regain control of their diets without compromising weight-loss goals or nutritional requirements. The "Rule of Halves" shows client how to use the standard dinner plate as a visual guide to this end. The percentages I have been suggesting to my clients for some years now do fall within the new U.S. Dietary Guidelines as reported in the Washington Post 8/17/04, due for release 2005.

Enclosed you should find a drawing of my "**Balanced Food Pyramid**" which also reflects my "Rule of Halves." For the pyramid I attempt to illustrate the importance of balance; thus the slogan, "*Balance is the key!!*" I also try to show how each macronutrient affects weight gain, its loss, and homeostasis once the caloric RMR is determined for the individual. For example, if protein is significantly increased displacing carbohydrates, the balancing pyramid will tilt backwards (left), indicating a reduction in the bodyweight, calories remaining the same. Conversely, a significant imbalance of fat in a diet will cause the pyramid to tilt forward (right), indicating the probability of a weight increase. Obviously the process is a bit more complex than this, but the graphic helps to visualize the point.

"**The Seat of Fitness**" is another teaching aid I will share as an attempt to integrate various and important fitness components in a graphic presentation. It shows the major exercise types, how they relate to each other, and generally what each macronutrient supports thereby highlighting its necessity. Finally, I try to illustrate the importance and comprehensiveness of rest. I hope my experience and suggestions prove useful, and I have enjoyed being of service to you.

Sincerely,

Richard Parker, Jr., C.C.S.

Parker
2 OF 3

STEADY WEIGHT!

≈25% PROTEINS

COMPLEX

≈25% FATS

WEIGHT LOSS!! (↑P or ↑F)

WEIGHT GAIN!! (↑P or ↑F)

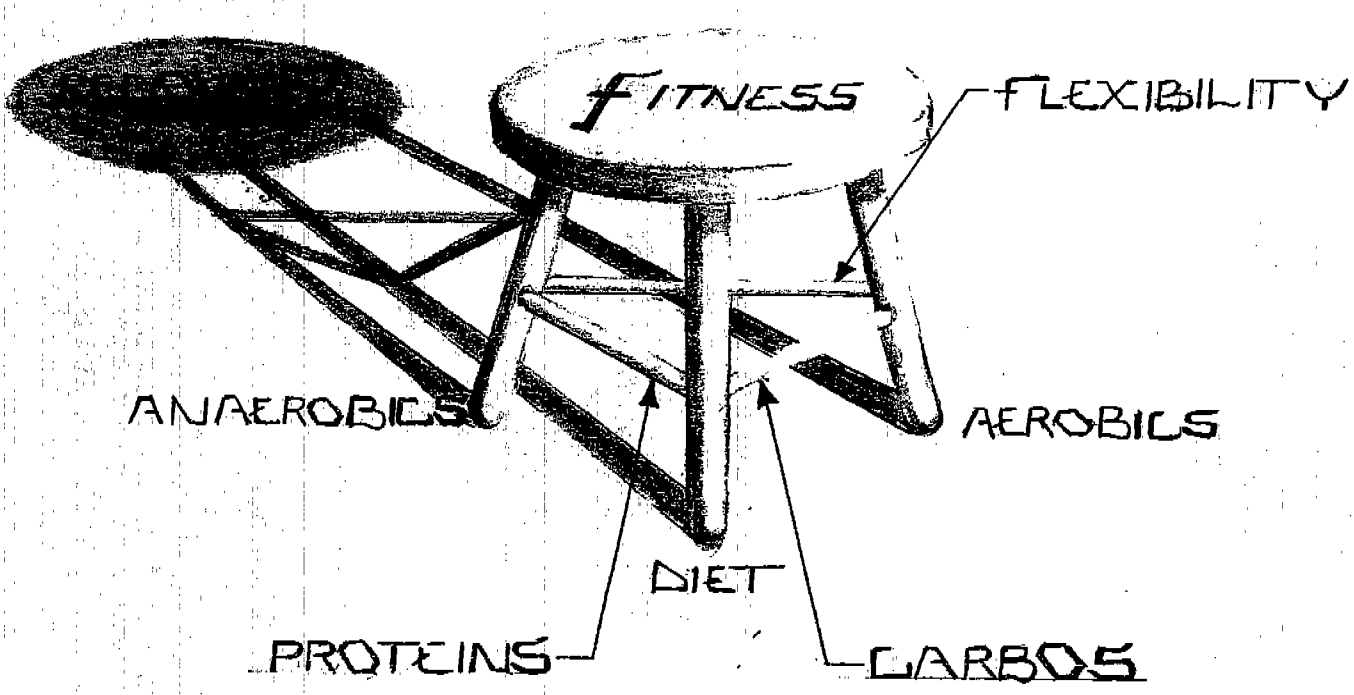
≈50% CARBOHYDRATES

SIMPLE

BALANCE is the Key!

Parker 3 of 3

The Parker Fitness Model
(THE SEAT OF FITNESS)



A WELL BUILT STOOL IS "GLUED" TOGETHER WITH FAT YOU CANNOT SEE! © 2003 RP

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Marybeth Peters

REGISTER OF COPYRIGHTS
United States of America

Mary Converse

AUG 24 2004

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Converse
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Beijing, Peoples Republic of China

Food Guide Pyramid Reassessment Team
USDA Center for Nutrition Policy and Promotion
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To Whom it May Concern,

I am writing to share my thoughts on the USDA Food Guide Pyramid. Since I changed my eating habits and lifestyle based on a CONTROLLED carbohydrate eating plan, my health and life has greatly improved. I would indeed appreciate it if you would please consider these brief comments in your decision to change the food guide pyramid.

I am studying to be an RN. I have always tried to exercise regularly and watch my eating habits and have been a Weight Watchers lifetime member for about 18 years. Unfortunately, the old food pyramid lulled me into a fools paradise, thinking I could eat 11 to 20 carbohydrates a day. Weight watchers got on the band wagon and allowed more bread, sweets and junk food in their plan. This led me into yo yo dieting that has been going on for 18 years. I never gained more than 25 pounds but the up and downs of my weight really began to take it's toll on my metabolism, until I could no longer lose the weight, even with walking 4 miles a day and eating only 1200 calories. My cravings for carbohydrate became so intense that I was very worried I was becoming a candidate for diabetes.

Enter the controlled carbohydrate lifestyle. I have been following the new food pyramid guidelines (as presented on Atkins website) for 2 years now. I immediately dropped my weight to ideal, and have maintained it within 7 pounds for 2 years. I no longer experience great swings in mood, cravings, appetite and weight. I have more energy and vigor than I had when I was 35. (I'm 48 years old). My studies to be an RN were what really helped me to see the sense of the carbohydrate controlled eating plan. It's based on sound scientific research regarding metabolism. When I read Dr. Atkins book, I could hardly believe that what I was reading was actually taught to me in school, and yet the USDA approved food pyramid was practically opposite of what the physiology books taught.

I can name at least 10 friends that have taken up controlledcarb eating and it has improved greatly the quality of life for them. Please, please, help save lives and improve lifestyles by educating the American people on the true value of following a CONTROLLED carbohydrate lifestyle by changing the approved food pyramid.

Thank you for your kind consideration of my letter.

Sincerely,

Mary Converse

Mary Converse

AUG 24 2004

August 23, 2004

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Magda 1 of 1

Food Guide Pyramid Reassessment Team
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To whom it may concern;

My wife and I don't feel that there is necessarily a problem with the food pyramid as much as there is in user ability to implement it. We suggest keeping the pyramid as is but for you to provide two items to make the information more usable to people that aren't experts in nutrition.

1) Provide a check off sheet that's coordinated with the pyramid showing daily allowances in each group.

2) Secondly and more important, you need for food packaging to tell you specifically how many boxes to check off on that list. For instance, if you're eating a frozen meal and it contains meat, potatoes and a vegetable then there should be color coordinated triangles telling you how much of each group to mark off on you check-off sheet (one red triangle for meats, 2 yellow triangles for veggies and two green triangles for potatoes, etc.). Just putting color coated triangles onto the packaging next to the other nutritional facts would be self explanatory and helpful for people that want to keep track of what they eat during the day.

You have to make this stuff foolproof because while we all want to be healthy, it's hard to become an expert in nutrition. We don't have time to learn how many grams of x we need or how many intakes of y.....most people just give up. Please make an idiot proof check-off chart like the following.

Glenn and Beverly Magda

Germantown, MD